

Secondary Storage

Secondary Storage — Structure

- hard disk drives
- solid state drive
- RAID structure
- tertiary storage devices (DVD, magnetic tape)

Hard Disk Drives — Anatomy

- stack of magnetic platters
- disk arms contain disk heads per recording surface, read/write to platters
- **Storage:**
 - platters divided into concentric *tracks*
 - *cylinder*: stack of tracks of fixed radius
 - tracks of fixed radius divided into *sectors*

Flash Memory

- **advantages:**
 - + solid state
 - + lower power consumption/heat
 - + no mechanical seek
- **disadvantages:**
 - limited number of overwrites
 - limited durability

RAID

- **Idea:** improve performance/reliability of storage system by storing redundant data

